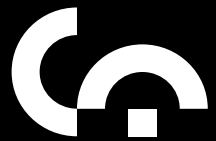


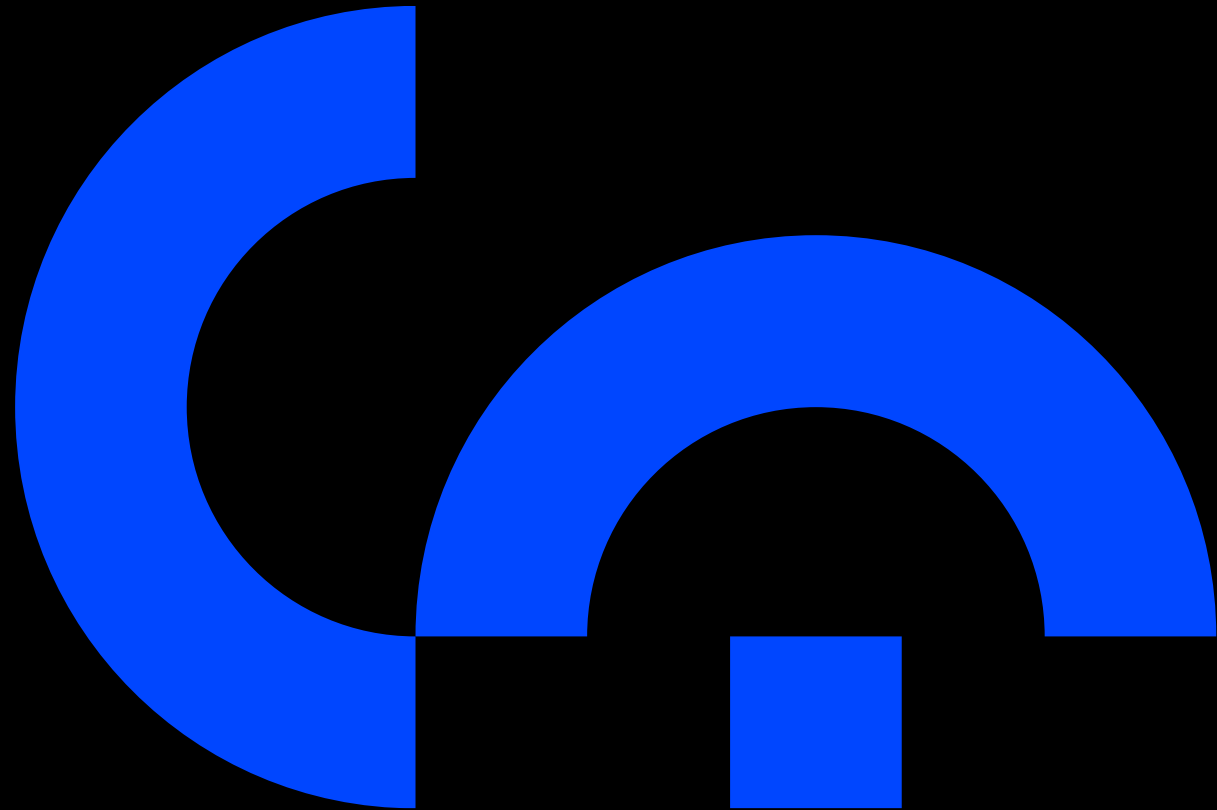
Beyond Compliance

Multi-Layered Authentication for Patient
Safety in Pharma

Heather Clarke-Hite



**Crane
Authentication™**





Pharma Authentication: Market Overview

Key forces reshaping pharma authentication

Threat Landscape

- **\$432B+ counterfeit medicine market**

Organized crime — larger than arms trafficking

- **1 in 10 medicines falsified (WHO)**

1M+ deaths annually in developing countries

- **Counterfeiting is getting easier**

Wider supply chains and new packaging lower barriers

- **Online channels blur legitimacy**

Post-COVID online buying creates new attack surfaces

Regulatory Evolution

- **DSCSA in full enforcement**

FDA issuing 483 observations; stabilization over

- **EU FMD expanding**

Digital Product Passports are the next wave

- **Global serialization baseline**

Multiple major markets mandating track-and-trace

- **Compliance ≠ counterfeit prevention**

Counterfeits can carry legitimate serial numbers

Market & Brand Strategy

- **Multi-layered authentication**

Multi-layered approach is the strongest strategy

- **Patient safety is the new lens**

From protecting product to protecting patients

- **Higher barrier-to-entry tech wins**

Advanced tech forces counterfeiters elsewhere

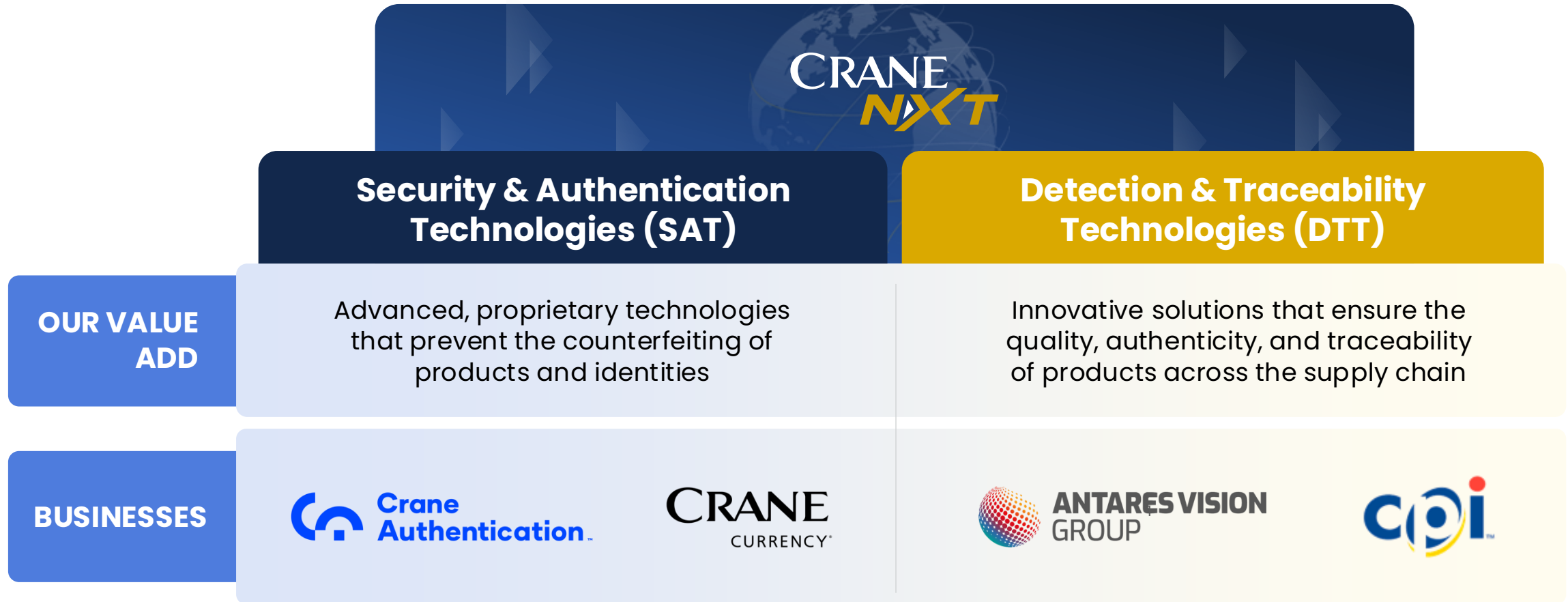
- **Forensic-grade evidence required**

IP teams need prosecution-ready proof, not alerts

Crane NXT: Securing What Matters Most for Global Brands



Authentication, detection, and traceability to protect products, revenues, and reputation





Crane Authentication: Who We Work With

Partnering across Brand and Government sectors with authentication solutions tailored to each domain

Brand customers

Product Authentication



Licensing Management



Online Brand Protection & Intelligence



Government customers

Government Revenue & Compliance Solutions



Identity & Verification



Crane Authentication & MM Packaging

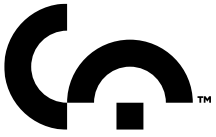
STRATEGIC PARTNERSHIP

Simplifying compliance. Accelerating innovation.

- **Regulatory-ready packaging**
Authentication built into the packaging workflow
- **Faster time to market**
Pre-validated, ready-to-deploy solutions
- **One partnership, end-to-end**
From design to production, no multi-vendor complexity



From Labels to Layers: Elevating Your Authentication Strategy



Secure code generation:

- Brand orders secure labels
- Codes printed in Data Matrix & QR formats



Manufacturing & aggregation:



Unit → carton → pallet scanning & hierarchy



Verification & enforcement:

- Consumer scans via smartphone
- Distribution tracking in InSight
- Brand enforcement authentication
- Customs verification

Crane's OpSec InSight® Platform

- End-to-end product visibility
- Lot-level traceability dashboards
- Counterfeit / diversion alerts
- DSCSA-ready audit trail





Pharma Authentication

Key takeaways

Patients can't verify what isn't there

- Serial numbers track product — they don't prove it's real. Authentication closes the gap between compliance and patient safety.

If patients can see it, they can trust it

- Visible, verifiable features turn every patient into a checkpoint. Advanced authentication designed to make fakes immediately detectable.

Every scan is a patient protected

- Real-time scan intelligence maps threats and arms enforcement with prosecution-ready evidence.

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